

C11  
C12  
b) assaying for the presence or absence of the *HKNG1* gene product, wherein the presence of a human *HKNG1* gene product indicates that the individual has or is at risk of developing a bipolar affective disorder or schizophrenia.

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C12  
19. (Amended) A method of identifying an individual having or at risk of developing a bipolar affective disorder or schizophrenia comprising the step of detecting the presence or absence of a *HKNG1* gene product in a patient sample wherein said method comprises the steps of:

a) incubating a sample in the presence of a detectably labeled antibody that identifies the *HKNG1* gene product; and

b) assaying for the presence or absence of the *HKNG1* gene product, wherein the presence of aberrant level of the human *HKNG1* gene product indicates that the individual has or is at risk of developing a bipolar affective disorder or schizophrenia.

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C13  
21. (Amended) The method according to Claim 1, wherein said immunoassay is an enzyme-linked immunosorbant assay (ELISA).

22. (Amended) The method according to Claim 1, where said *HKNG1* gene product is detected in a blood, serum, lymph, or thoracentesis sample.

23. (Amended) The method according to Claim 1, wherein said *HKNG1* gene product is detected in cerebrospinal fluid.

24. (Amended) The method according to Claim 1, wherein said *HKNG1* gene product is detected *in situ* in a histological specimen.

25. (Amended) The method according to Claim 24, wherein said *HKNG1* gene product is detected on the surface of a cell.

26. (Amended) The method according to Claim 1, wherein said *HKNG1* product is a conserved variant or peptide fragment thereof.

27. (Amended) The method of Claim 1, wherein said *HKNG1* gene product comprises an amino acid sequence which is different from the amino acid sequence depicted in SEQ ID NO:2.

28. (Amended) The method of Claim 1, wherein said *HKNG1* gene product comprises an amino acid sequence which is different from the amino acid sequence depicted in SEQ ID NO:4.

29. (Amended) The method according to Claim 1, wherein said *HKNG1* gene product comprises the amino acid sequence encoded by a nucleic acid molecule that hybridizes under highly stringent conditions to the nucleic acid insert of the clone contained in ATCC accession No. 98351, wherein said stringent conditions comprise hybridization in 0.5 M NaHPO<sub>4</sub>, 7% SDS, 1 mM EDTA at 65°C, and washing in 0.1xSSC/0.1%SDS at 68°C.

30. (Amended) The method of Claim 29, wherein said *HKNG1* gene product comprises the amino acid sequence of SEQ ID NO:2 with a substitution of a lysine for a glutamic acid at amino acid residue 202 of SEQ ID NO:2.

31. (Amended) The method of Claim 29, wherein said *HKNG1* gene product comprises the amino acid sequence of SEQ ID NO:4 with a substitution of a lysine for a glutamic acid at amino acid residue 184 of SEQ ID NO:4.

*C13 Gene*

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In the drawings:

Please substitute the attached drawings for Figs. 1-5.